Course & Branch :B.E/B.Tech - CSE/DCS/IT/P-IT
Title of the Paper :System Programming
Sub. Code :412507-511507-512507-6C0101-6CPT0013
Time : 3 Hours   Max. Marks :80
Date :23/11/2009   Session :FN

PART - A   (10 x 2 = 20)
Answer ALL the Questions

1.   What is an assembler?

2.   What is the need of SYMTAB(symbol table) in assembler?

3.   Define macro processor.

4.   Define absolute loader.

5.   What is compiler? List the classifications of compilers.

6.   What are the recovery actions handled by lexical analyzer?

7.   What are the difficulties with top-down parsing?

8.   What is a parse tree?

9.   How would you represent the following equation using the DAG
     a: = b* - c + b* - c. What is the purpose of DAG?

10. Define code optimization.

PART – B   (5 x 12 = 60)
Answer ALL the Questions

11. Explain in detail about basic assembler functions.

(or)

12. Explain the design of two pass assembler.

13. Discuss the basic loader functions and design relocatable loader.

(or)

14. Explain the various machine independent macro processor features in detail.

15. (a) What is the role of lexical analyzer.?
    (b) Specify the lexical form of numeric constants in C language.

(or)

16. (a) Draw the DFA for the regular expression R = (a/b)* abb(a/b)*. (8)
    (b) Distinguish between a deterministic finite automation (DFA) and a non-deterministic finite automation (NFDA). (4)

17. Explain the algorithm for the construction of predictive parser.

(or)

18. Explain the methodology used in constructing a parse tree.

19. Describe about the loop optimization technique with suitable example.

(or)

20. (a) Explain the process of constructing a DAG for basic blocks.
    (b) Write a short note on reducible flow graph.